

Remarks

- 1) Applicant thanks the Examiner for her office action and hopes that this response will further the understanding of applicant's invention.
- 2) Applicant amended the specifications to conform to 1.77(b) in accordance with the Examiner's demand.
- 3) Claims 34-109 are pending in the application and stand rejected. Claims 34, 68 and 105 have been amended by the applicant in this amendment and response.
- 4) The Office rejected claims 34-44, 46-51, 54, 57-62, 64-78, 80-85, 91-96 and 98-109 as being unpatentable under 35 U.S.C. §35 102 (e) as being anticipated by Eaton et al., (US Patent 6,003,019, Eaton hereinafter). Applicant would like to explain his understanding of some of the context behind the Eaton patent in order to show that this document concerns a different type of software application designed to address a fairly specific and well known problem encountered in the field of financial services software and hardware.
- 5) An examination of the Eaton patent and in particular the drawings, show the prior art relevant to the Eaton patent and the solutions presented by Eaton thereto.

Figure 1 of the Eaton patent shows a number of different ways in which a customer and/or employee of a financial services organization such as a bank, can interact with that organization. This figure shows bank branches self services machines such as ATMs, telephones, off-site computer based communications networks using a home personal computer and point of sale systems. These are known collectively referred to by Eaton as delivery channels and each has different physical characteristics (Col. 1, ll. 19-20). The problem with the state of the art as encountered by Eaton was that systems such as the ATM, point of sale systems and home banking systems, all require to use separate local databases to record financial services transactions (Fig. 1, col. 1, ll. 19-28). As stated by Eaton, each of the systems is transaction intensive and channel specific. That is, it provides a substantial number of simultaneous service transactions through

service specific hardware and software channels. The disadvantage of such service specific delivery channels is that the services are difficult to expand or enhance and difficult to maintain and control. It is a further disadvantage that potentially valuable information about customers and their behavior is not easy to correlate across channels. (Col. 1, ll. 3-33). The solution to this problem provided in Eaton is well described with reference to figure 2. Figure 2 shows an integrated channel manager that collects and effectively translates into a common form, these various channel specific transactions. Eaton therefore relates to a very large over arching problem with financial services organizations and attempts to solve this by providing an interface arranged to allow the delivery channel specific components of each delivery channel to be stored in a single database.

- 6) In contrast the present invention addresses an entirely separate problem in the field of ATMs, kiosks or similar transaction machines. More particularly, the present invention relates to the field of improvements to the operating system of a transaction machine such as an ATM or kiosk. The invention provides software, termed middleware, that links to the existing operating system. Eaton discloses a system in which at least one application services is connectable to any channel in a channel independent manner. The term channel in this case, clearly refers to various physical channels such as ATMs, or point of sale, or home banking, or interactions with a bank branch.
- 7) The present invention provides an additional layer of software WITHIN the transaction machine. This software is designed to operate with the existing operating system of the transaction machine to extend the functionality of the transaction machine operating system to allow it to operate easily with peripherals transaction devices of the transaction machine. Examples of these peripherals are devices such as card readers, cash dispensers, cash recyclers, receipt printers etc. All of these devices have a specific role in the overall function of a transaction machine such as an ATM, and contain extended features that allow them to operate in an unattended environment. Examples of such features include

extended mechanical capabilities such as the detection of "paper taken" in a receipt printer, the ability to detect fraudulent tampering of a cash dispenser, and an extended set of "sensors" that can detect a large range of mechanical error conditions. The present invention covers the extension of the PC operating system within a transaction machine such as an ATM using a middleware layer such that the special devices and the extended features of these special devices can be supported by the base software platform which would now consist of the operating system plus the middleware.

- 8) Independent claims 34 and 68 have been amended without narrowing their scope, in order to clarify the claim and better reflect these aspects of the present invention.
- 9) The present invention as defined in those independent claims is novel with respect to the prior art because the prior art does not disclose a middleware software layer that EXTENDS TO THE FUNCTIONALITY OF A COMPUTER OPERATING SYSTEM ON A COMPUTER BASED TRANSACTION MACHINE. In addition, the independent claims clearly state that the middleware provides functionality adapted to the particular hardware of the transaction device. The cited references do not teach or suggest this feature as it relates to allowing information from a plurality of delivery channels to be gathered and integrated by an integrated channel manager. Whilst it is clear from figure 2 of the Eaton reference that the integrated channel manager of the Eaton document acts as an intermediary between a number of very different channels of communication that can exist within a financial services organization, it does not perform at the function of the software defined as middleware in the present invention as claimed. In support of this assertion, applicant draws the examiner's attention to the description of the middleware software contained on pages 13 to 18 of the application as currently on file. In particular, lines 21 to 24 of page 13 describe the middleware software layer as one that extends the function of an underlying operating system and which in turn provides a single programming

interface for an ATM / kiosk control system application to be written to. This is in no way similar to the disclosure of Eaton.

- 10) Claim 105 was made dependent on claim 34 and therefore incorporates all of its limitations. Rather than a narrowing of the claim, the amendment stems purely from commercial considerations, as the reference do not cite operating a transaction machine by one organization and having controlling software application be provided by a second organization wherein the software application provides a transaction type different than the transaction type associated with the first organization.
- 11) The office further asserted other limitations as being shown by the Eaton reference, and rejected a large number of claims based on those assertions, including independent claim 106 and its dependent claims. The Office asserted that each and every one of those limitations are disclosed in "col. 1, lines 40-60 and col. 3, line 5 to col. 5 line 5". Despite his best efforts, applicant's agent failed to find any mention, reference or even a remote hint to a large number of those limitations ANYWHERE in US Patent 6,003,019. As those limitations do not exist in the reference, applicant submits that the claims are novel and non-obvious, and are therefore allowable. **Alternatively, applicant respectfully requests that the Office will individually, specifically, and particularly, point out where in the Eaton reference, each of the following items are disclosed** (Relevant claims are in parenthesis, some limitations apply to more claims):
 - "Extending the functionality of a computer operating system" (claim 34)
 - Transaction objects and controls in the middleware software (claim 37)
 - Capabilities interface can communicate the capabilities of the control (claim 41)

- Asserting errors and/or transgressions by the middleware(claim 46)
 - Copying to disk when transaction machine is idle (claim 47)
 - A web browser (claim 48)
 - Altering the middleware and applications across the network (claim 57)
 - Transaction machine is capable of communicating status (claim 58)
 - Creating a separate thread for each control (claim 95)
 - Generic error handlers, (claim 98)
 - Configuration data in distribution file (claim 99)
 - Constructing user interface using web authoring tools (claim 100)
 - Microsoft windows NT (claim 101)
 - Functional interface to particular "hardware capabilities" (claim 68)
 - An extranet (defined as interfacing dissimilar ATM/Kiosks in page 3 in the specifications, relating to claims 103-104)
 - Extranet with a security mechanism (claim 104)
 - First organization operating a transaction machine and software operated by a second organization (claims 105)
 - ANY mention of ticket sales (claim 106-109).
- 12) Claims 45, 52-53, 55-56, 63, 86-87, 79, 89-90, and 97 under 35 U.S.C. 103(a) as being obvious in view of Eaton and Wolfe (US 6,006,252), and of Eaton in combination with Schraeder (mistakenly identified in the Office Action as 5, 903, 811, applicant believes the office meant US 5,903,881, to Schraeder, as identified on the Notice of References Cited). Those rejections are believed to be moot as these rejections are based on a combination with the Eaton reference shown to be non-relevant to the present invention. Furthermore, the claims depend from claims 34 and 68. As applicant believes claims 34 and 68 have been shown allowable, those claims dependent therefrom are also allowable.
- 13) Claim 106 and its depend claims 107-109 stand rejected under 35 U.S.C. 102(e) as being anticipated by Eaton. As stated above applicant failed to find any

mention, hint or possible equivalent to the claimed method in Eaton, and is therefore unable to respond to the rejection on substantive grounds. Applicant therefore submits that the claims are novel and non-obvious. Alternatively, applicant respectfully requests that the Examiner will particularly point to the description in Eaton which contains the claim limitation.

Applicant has made a good faith effort to address each and every point made by the Examiner, and amended the claim and the specifications in order to place the application in condition for allowance. Should the Examiner find any deficiency in this amendment or in the application, or should the Examiner believe for any reason, that a conversation with applicant's agent may further the allowance and issuance of this application, the Examiner is kindly requested to contact Shalom Wertsberger at telephone (207) 799-9733.

In light of the showing and all other reasons stated above, applicant believes that the rejections and objections presented by the Examiner in the office action mailed to applicant Oct 21, 2002 were overcome. Applicant therefore submits that the claims as amended are in condition for allowance. Reconsideration and withdrawal of the rejection and issue of a notice of allowance on all pending claims is respectfully solicited.

Respectfully submitted



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